

Research Brief

Using Data for School Improvement

Question:

How can principals and teachers use available data to plan school improvements?
How can principals and teachers gather and analyze data that are useful for school reform?

Summary of Findings: Karen Levesque and her colleagues sum up the problem of data use in schools this way. “Most school districts and schools in this country are routinely involved in data collection. Administrators tally average daily attendance (ADA) rates and maintain transcript data, including students' course enrollments and grades. As a condition of receiving state or federal funds, they collect information on participants in particular programs or activities. Administrators also rely on anecdotal information to assess informally the quality of teaching and learning at their site, and teachers and counselors use various assessment instruments for diagnosing individual students. Thus, school districts and schools collect a wide array of data. However, they do not typically use the data they collect in a systematic fashion to identify strengths and weaknesses at their sites and to develop improvement strategies.

One reason for the lack of data use is the perception that the data are being collected for someone else's purposes. Administrators report ADA to the state education agency, provide transcripts to postsecondary institutions, and report grades to students and parents. Similarly, participant information is reported to the state or federal office that funds a particular program, and test scores are maintained by the teacher or counselor who administers the test. Rather than considering these various data as potential sources of information on the quality of teaching and learning at a site, educators view them as obligatory or otherwise limited in value. When "data" are used, they often take the form of anecdotes or casual observations. Without taking steps to gather systematic, representative information, data collected in this way may lead to inappropriate conclusions and actions.”

More recently, however, data utilization has been the centerpiece of school reform efforts, focusing principals' and teachers' attention on student performance as the most important driving force for school improvement. However, as Ron Williamson, professor of educational leadership at Eastern Michigan University says, “data by themselves are not very useful to principals and teachers for school improvement purposes. It's only when data have been turned into information, and that information is used to stimulate conversations about the future directions of the school, that data utilization is meaningful and important in school reform.”

In order for data to be useful to principals and teachers, there is agreement among most scholars that certain conditions must be met:

1. **The data must be clearly relevant to the people using them.** If teachers are asked to look at test performance in their subject areas, and consider the reasons for both positive and negative aspects of student performance, they can contribute much to the conversation. It is less likely that they will feel either empowered or engaged in a discussion of per pupil expenditures in the district. People are interested in the data they are likely to influence, not data for the sake of data.
2. **Data must be reduced or transformed to become clear “information.”** Huge sets of raw data are both numbing and overwhelming. Comparisons, disaggregation, trend analyses, and other “transformations” give meaning to raw data and help people form conceptions of its importance.
3. **Data must be trustworthy.** Stakeholders must have confidence in the data; they must believe that it represents the reality of their school and their circumstances. Trustworthiness is a function of the way the data are collected, the integrity with which it is handled, and the reasonableness of the analysis and reduction techniques.

It’s a short list, but a very tall order. Fortunately, numerous resources have been created by various players in the school reform movement to help principals gather, transform, and use data for school improvement efforts with their faculty and community. The resources provided below represent some of the best and most useful.

Online Resources:

Guide to Using Data in School Improvement Efforts

<http://www.ncrel.org/datause/howto/guidebook.pdf>

Are you looking for ways to integrate data into the school improvement process? Would you like to explore ways to use data to guide decision making about instruction, curriculum, and programming? This guide from NCREL/Learning Point is designed for educators who are beginning to learn how to use data in their school improvement planning process. The guide offers some foundational information on types of data, strategies for analyzing and understanding data, and methods for determining how these efforts can influence goals and planning.

Tools for School Improvement Planning: A project of the Annenberg Institute for School Reform.

<http://www.annenberginstitute.org/tools/>

The Tools for School-Improvement Planning Web site reflects the Annenberg Institute's vision of accountability: any system designed to raise student achievement must be firmly

<http://www.educationpartnerships.org/>

committed to equal opportunities for all students and to ongoing, reflective use of data to inform decisions. The Tools section of the site contains observation protocols, focus group samples and questions, surveys, questionnaires, and other tools to help practitioners examine their specific focus areas of school improvement.

Data Use in Urban High Schools

http://www.alliance.brown.edu/pubs/data_use/datuse_urbhs.pdf

The purpose of the paper is to present initial case study evidence that can contribute to deeper understandings of conditions and practices that either promote or act as barriers to the use of data by school staff, to discuss how disaggregated data are used for improvement in the process of restructuring low performing high schools, and to examine the policy and practice implications of achieving effective data use.

School Improvement Through Data Driven Decision Making

<http://www.ncrel.org/datause/>

This Web site is designed to give educators—and others involved in using data in a classroom, school, or district—a variety of places to find resources, tools, and action steps to foster school improvement.

Using Data to Drive School Improvement

<http://www.my-ecoach.com/online/webresourcelist.php?rlid=713>

This helpful site, prepared by Barbara Bray, shows how to gather data that looks at students, teachers, and the school community in a variety of ways. This resource list will provides some starting points in the analysis of: 1. Student learning data, 2. Demographic data, 3. Perceptions data, 4. Program data.

Using Data for Program Improvement: How Do We Encourage Schools To Do It?

<http://vocserve.berkeley.edu/CenterFocus/CF12.html>

This article, by Karen Levesque, Denise Bradby, and Kristi Rossi, explores how to create performance systems and indicators for use at the local school level in school improvement initiatives.

Using Data for School Improvement

Policy Research from the National School Boards Association

<http://www.nsba.org/site/docs/1200/1142.pdf>

This Research Policy Brief helps readers understand what data-driven school improvement is and why it is important. It is meant to serve as an introduction to how data can help board members make better policy decisions. The material in this Brief is based largely on a more comprehensive publication by the National School Boards Foundation called *Improving School Board Decision Making: The Data Connection*, online at www.nsb.org.

Using Data to Improve Schools

<http://www.aasa.org/cas/UsingDataToImproveSchools.pdf>

From AASA, *Using Data to Improve Schools: What's Working* is an easy-to-read guide to using data to drive school improvement. School system leaders and their staffs can learn from this book how to build a district wide culture of inquiry that values the use of data for sound decision-making. School board members, parents and community members interested in helping improve schools will find tools for their work as well in this guide. It describes the challenges and the successes of educators from districts both large and small committed to using data.

**Improving Teaching and Learning with Data-Based Decisions:
Asking the Right Questions and Acting on the Answers**

By Nancy Protheroe

<http://www.ers.org/spectrum/sum01a.htm>

From Educational Research Service (ERS), this article outlines major findings about the use of data as a school improvement tool and offers specific strategies for principals and teachers to use in their own schools.

Data-Driven School Improvement. ERIC Digest.

by Johnson, James H.

<http://www.ericdigests.org/1997-3/data.html>

This ERIC digest provides a brief, easy to read introduction to the concept of using data at the local school level to improve student performance.

Evaluation Information

http://www.csrlclearinghouse.org/index.php?option=com_content&task=view&id=18&Itemid=10

This site explores the role of evaluation information and data in the comprehensive school reform process. It provides links to other practical resources, including tools and templates, for using data effectively.

Data Analysis for School Improvement by Larry Lashway

http://cepm.uoregon.edu/publications/roundup/Winter_2002.html

The five documents reviewed in this *Research Roundup* from the Clearinghouse on Educational Policy and Management find that schools benefit when leaders use the data to challenge their intuitions and assumptions. Defining "data-driven" simply as "the consistent use of objective information to enhance human judgment," the authors promote the use of data not just to satisfy legal requirements but also to focus action to improve student learning.

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